

### **REMARKS/ARGUMENTS**

Reconsideration and allowance in view of the foregoing amendment and the following remarks are respectfully requested.

Entry of the above amendment after final rejection is respectfully requested as raising no new issues and as reducing issues on appeal. Claim 1 has been amended above to incorporate the limitations of dependent claim 2 and an obvious typographical error in the incorporated language of claim 2 has been corrected consistent with page 12, lines 23-24 and page 17, lines 13-14 of the specification. Further, claim 14 has been amended to incorporate the limitations of dependent claim 15, also correcting an obvious typographical error. Claims 3 and 16 have also been amended to correct obvious typographical errors.

Claim 2 was objected to because of a noted informality. The matter noted by the Examiner has been corrected in the text incorporated from claim 2 into claim 1. Similar language was used in dependent claim 15 and has also been revised as now incorporated in claim 14.

Claims 1, 5-7, 14 and 18-20 were rejected under 35 USC 102(b) as being anticipated by Miyashita et al. Applicant respectfully traverses this rejection. However, to advance prosecution, the limitations of dependent claim 2 have been incorporated into an amended claim 1 and the limitations of dependent claim 15 have been incorporated into an amended claim 14 so that the Examiner's rejection has been mooted.

Claim 2-4 and 15-17 were rejected under 35 USC 103(a) as being unpatentable over Miyashita. Applicant respectfully traverses this rejection.

The feature of the invention is that in the spark plug equipped with a first ground electrode (4) facing a tip portion of the center electrode (3) and a second ground

electrode (5,6) which faces a portion of a side wall of the center electrode and works to produce a spark between itself and the center electrode when the porcelain insulator (2) is fouled with carbon deposits. A shoulder (3b) is formed on a side wall of the center electrode to define a larger-diameter portion (3e) and a small-diameter portion (3d) and tapers toward the tip portion of the center electrode. The boundary (3c) between the shoulder and the large-diameter portion is located inside the tip portion (2a) of the porcelain insulator, and the wear resisting member (7) is provided on a portion of the side wall of the center electrode which faces the second ground electrode (5,6) in the vicinity of the tip portion (2a) of the porcelain insulator (2), for providing resistance to wear of the center electrode.

Miyashita teaches a structure in which a metallic surface of a base material of a center electrode containing Fe and Cr serving to reduce the corrosion is exposed to a tip surface of the insulator (3) in order to form a corrosion suppression layer 30 on the surface of the insulator (3).

The inventors of this application first found that most of the wear of the center electrode usually occurs on a side surface near the tip of the insulator and that a wear resisting member is preferably located inside a circle whose radius  $R \geq (d + 0.1\text{mm})$  to ensure the wear resistance of the side wall of the center electrode over a practical service life of plugs (e.g., a travel distance of 100000 to 200000km) in an automotive vehicle).

As noted by the Examiner, Miyashita is silent about the feature of the invention previously recited in claims 2 and 15 and now recited in the independent claims. However, the Examiner summarily concluded that "one of working skill" would "rearrange" the wear resistant member to be within the recited circle as a matter of obvious design choice. Applicant respectfully disagrees and challenges the Examiner's summary conclusion in this regard.

The initial burden of establishing a basis for denying patentability to a claimed invention rests upon the Examiner. In re Piasecki, 745 F. 2d 1468, 223 USPQ 785 (Fed. Cir. 1984). In establishing a *prima facie* case of obviousness under 35 U.S.C. § 103, it is incumbent upon the Examiner to provide a reason why one of ordinary skill in the art would have been led to arrive at the claimed invention from the prior art. Ex parte Clapp, 227 USPQ 972 (BPAI 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from applicant's disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp. 837 F.2d 1044, 7 USPQ 2d 1434 (Fed. Cir. 1988).

Rejections based on 35 USC §103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner has initial duty of supplying the factual basis for the rejection. The Examiner may not resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis. See In re Wanery, 379 F.2d 1011, 1017, 154 USPQ 173, 177-78 (CCPA 1967).

In the present case, the Examiner has cited no evidence in support of the summary conclusion that one still in the art would "obviously" arrive at the structure meeting the specific limitations of claims 1 and 14 as now amended. Indeed, there is no cited evidence that a skilled artisan practicing "routine experimentation" would obviously be led to a structure meeting the specific limitations of applicant's claim. Because Miyashita does not teach the combination specifically claimed by applicant and the remaining art of record does not teach or suggest that Miyashita should be "rearranged", as suggested by the Examiner, to meet the limitations of applicant's claim, it is respectfully submitted that a *prima facie* case of obviousness has not been established in the present case.

HANASHI et al.  
Appl. No. 10/073,268  
March 23, 2005

Because none of the references of record discloses the details of the claimed invention lacking in the primary reference, nor the unique advantages thereof, there can be no suggestion to modify the structure to contain those features. See In re Civitello, 339 F.2d 243, 144 USPQ 10, (CCPA 1964).

Further with regard to the Examiner's rejection of claim 3 and 16, it is respectfully submitted that in the present case, Miyashita does not disclose the "general conditions" of the noted claims and thus fails to guide the skilled artisan to the width recited in claims 3 and 16.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and an early Notice to that effect is earnestly solicited.

Respectfully submitted,

**NIXON & VANDERHYTE P.C.**

By:   
Michelle N. Lester  
Reg. No. 32,331

MNL:slj  
1100 North Glebe Road, 8th Floor  
Arlington, VA 22201-4714  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100